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SOURCE Svet Motoru.

TEST RUN OF A NEW CZECHOSLOVAK AUTOMOBILE

The following article appeared in the journal of the Czechoslovak Auto Club as the last of a series of reports publicizing the 60,000-kilometer test run of the Tatra sedan and its progress across three continents. The test run was conducted as a pilot project to test the usability of new alloys in automobile manufacture. Results are claimed to have been satisfactory. The Tatra is one of the leading Czechoslovak-made automobiles.

Recently a test run was completed by one of the current models of the Tatra Automobile Plant in Czechoslovakia. The car used for the 60,000-kilometer, all-weather run across Europe, Africa, and South America was the Tatra T-87 sedan. It was equipped with an air-cooled, V-8 type engine and was taken from the assembly line without any special preparation. Upon return to the plant, the automobile was completely dismantled in the laboratory and the individual parts studied in detail.

For the most part, the engine performed satisfactorily, in spite of adverse climatic and terrain conditions. Shortly after the start of the test run, some 50 kilometers from home, the air filter became clogged with fine sand and dust and had to be cleaned. The filter proved unsatisfactory throughout the journey and some pistons showed signs of wear due to dust particles which were not filtered out. The block, an electronic [sic] steel casting, withstood corrosive influences well. The pistons performed well and were not excessively carbonized; neither were the valves. The rings, however, showed signs of excessive wear, and final measurements varied up to minus 4.5 millimeters. This was attributed to material shortages during the production phase.

All parts of the transmission were made from sparingly alloyed chrome manganese steel. Experiments are under way to introduce this type of steel into automobile and motorcycle production; consequently this particular Tatra transmission can be considered the first working model of its type. Results have been

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evaluated accordingly. All gear wheel surfaces except the first [low] gear, withstood the test run without showing undue wear. The first gear, however, was badly worn along 14 of its teeth, probably because of the unusual number of times this gear was placed in operation in difficult terrain. It is doubtful whether normal use in Czechoslovakia would place such strain on the transmission. The drive of the transmission oil pump, made of Novotex, showed wear, probably because of the inability of Novotex to withstand high temperatures.

Several springs had to be replaced during the trip, but the one spring which lasted to the end showed only slight permanent deformations. The steering linkage had excessive play, which can be prevented in the future. In general, the test run proved that sparingly alloyed steels are suitable for use in the production of automobile gears. The test run is reported to have satisfied engineers, designers, and the automobile-conscious public as to the quality of one of the leading automobiles manufactured in Czechoslovakia.

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